CLAIMS

What is claimed is:

1. A component suitable for use in an x-ray device, the component comprising:

a body substantially comprised of metal; and

an emissive coating disposed on at least a portion of the body, the coating substantially comprising an inorganically bonded ceramic.

2. The component as recited in claim 1, wherein the body substantially comprises stainless steel.

3. The component as recited in claim 1, wherein the emissive coating includes an oxide filler.

4. The component as recited in claim 1, wherein the emissive coating is dielectric.

5. The component as recited in claim 1, wherein when the emissive coating is in an uncured state, the emissive coating is substantially free of volatile organic compound emissions.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

6. The component as recited in claim 1, wherein when the emissive coating is in an uncured state, the emissive coating takes the form of a slurry suitable for application to the component by spraying.

7. The component as recited in claim 1, wherein when the emissive coating has an emissivity of about 0.6 or higher.

8. The component as recited in claim 1, wherein when the emissive coating has an emissivity of about 0.2 or lower.

9. The component as recited in claim 1, wherein the emissive coating substantially prevents oxidation of the coated portion of the body at body temperatures of up to about 1450 degrees F.

10. The component as recited in claim 1, wherein the emissive coating substantially prevents corrosion of the coated portion of the body at body temperatures of up to about 1450 degrees F.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

11. A vacuum enclosure for use in an x-ray device, the vacuum enclosure comprising:

a metal body defining an inner surface and an outer surface; and

an emissive coating disposed on a portion of at least one of the surfaces defined by the metal body, the emissive coating substantially comprising an inorganically bonded ceramic.

12. The vacuum enclosure as recited in claim 11, wherein the metal body substantially comprises stainless steel.

13. The vacuum enclosure as recited in claim 11, wherein the emissive coating is disposed on a substantial portion of the inner surface of the metal body.

14. The vacuum enclosure as recited in claim 11, wherein the metal body is configured for use with a rotating anode.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

15. The vacuum enclosure as recited in claim 11, wherein the metal body is configured for use with a stationary anode.

16. The vacuum enclosure as recited in claim 11, wherein the emissive coating includes an oxide filler.

17. The vacuum enclosure as recited in claim 11, wherein the emissive coating is dielectric.

18. The vacuum enclosure as recited in claim 11, wherein the emissive coating substantially prevents oxidation of the coated portion of the body at body temperatures of up to about 1450 degrees F.

19. The vacuum enclosure as recited in claim 11, wherein the emissive coating substantially prevents corrosion of the coated portion of the body at body temperatures of up to about 1450 degrees F.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

20. A vacuum enclosure for use in an x-ray device, the vacuum enclosure comprising:

a stainless steel body defining an inner surface and an outer surface; and

an emissive coating disposed on at least a portion of the inner surface defined by the stainless steel body, the emissive coating substantially comprising an inorganically bonded ceramic having an oxide filler.

21. The vacuum enclosure as recited in claim 20, wherein when the emissive coating is in an uncured state, the emissive coating is substantially free of volatile organic compound emissions.

22. The vacuum enclosure as recited in claim 20, wherein when the emissive coating is in an uncured state, the emissive coating takes the form of a slurry suitable for application to the vacuum enclosure by spraying.

23. The vacuum enclosure as recited in claim 20, wherein when the emissive coating has an emissivity of about 0.6 or higher.

24. The vacuum enclosure as recited in claim 20, wherein the emissive coating substantially prevents oxidation of the coated portion of the vacuum enclosure at vacuum enclosure temperatures of up to about 1450 degrees F.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

25. The vacuum enclosure as recited in claim 20, wherein the emissive coating substantially prevents corrosion of the coated portion of the vacuum enclosure at vacuum enclosure temperatures of up to about 1450 degrees F.

26. The vacuum enclosure as recited in claim 20, wherein the emissive coating takes the form of a porous free ceramic composite.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111